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Dated: August 22, 2005 Signature: (Marco Jimenez)

Docket No.: 393032003100
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Satoru MOTOYAMA

Application No.: 09/037,822 Confirmation No.: 7579

Filed: March 10, 1998 Art Unit: 2141

For: TEMPORARY STORAGE OF COMMUNICATION DATA Examiner: Stephan F. Willett

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

As required under § 41.37(a), this brief is filed within five months of the Notice of Appeal filed in this case on March 21, 2005 and is in furtherance of said Notice of Appeal.

The fees required under § 41.20(b)(2), and any required petition for extension of time for filing this brief and fees therefor, are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

I. Real Party In Interest
II Related Appeals and Interferences
III. Status of Claims
IV. Status of Amendments
V. Summary of Claimed Subject Matter

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is Yamaha Corporation, the current assignee of the above application.

II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

A. Current Status Of Claims

1. Claims canceled: 1-28, 30-32, 34-36, 38-40, 48, 49 and 51
2. Claims withdrawn from consideration but not canceled: none
3. Claims pending: 29, 33, 37, 41-47, 50 and 52
4. Claims allowed: 29, 33, 37, 47, 50 and 52
5. Claims rejected: 41-46

B. Claims On Appeal

The claims on appeal are claims 41-46.

IV. STATUS OF AMENDMENTS

Applicant did not file any amendments in response to the rejection.

V. SUMMARY OF CLAIMED SUBJECT MATTER

The present invention, as set forth in independent claim 41, relates to a music data processing apparatus. The apparatus receives music data over a public communications line. Transmission delays along the communications line can disrupt the receipt of music data. The present invention overcomes such disruptions by utilizing the time information of the first received music data to set the time of the apparatus. The time is rectified (e.g., subtracted by a given value) and set as the time of the apparatus. As the apparatus begins to count up the set time toward the time of the first received data, received music data is buffered in a memory of the apparatus. Once the apparatus reaches the time of the first received data, processing can proceed smoothly in view of the buffered data. Utilizing the time of the first received data further obviates the need to do any further time adjustments.

Fig. 1 illustrates an exemplary arrangement of a communications network. Packets of data, such as music data generated by a MIDI music instrument 2, are transmitted over a communications network. Fig. 4 illustrates the format of a packet of MIDI data. The packet includes a data field 42 for MIDI data and a header field 41. The header field 41 comprises time data 46 representing reproduction time (see page 15, line 18 to page 16, line 2).

The transmitted packets of MIDI data are received by home computer 9. As illustrated in Fig. 2, home computer 9 has a communications interface 29 for receiving the packets, a memory such as RAM 21 for temporarily storing the MIDI data and a CPU 23. CPU 23 controls the tone generator 28 to generate tone signals based on the stored MIDI data.

Figs. 7 and 8 detail the reception process performed by the home computer 9. Once a packet is received at step SB1, the home computer first judges whether or not the received packet is the *first* received packet (see page 21, lines 3-10). This is achieved through a "Receive" flag that is initially set to "0." When the first packet is received, the flag is checked to see if it is equal to "1" at

step SB2. The answer is "no" for the first received packet. As a result, the process flows to step SB3 where the time of the computer 9 is set and then to step SB4 where the flag is set to "1." Subsequently received packets are judged at step SB2 to not be the first received packet based on the flag being set to "1." For subsequently received packets, the process proceeds directly to step SB6.

At step SB3, the time data of the first received packet is rectified and the rectified time is set as the home computer's time. For example, Fig. 7 illustrates that the time data of the first received packet is subtracted by a predetermined value. The resulting time is then set as the "user side time," i.e., the time of the home computer 9 (see page 21, line 11 to page 22, line 8). Note that when the home computer 9 judges that a received packet is not the first received packet at step SB2, it proceeds directly to step SB6. That is, it skips step SB3 and does not re-set the time of the apparatus for subsequently received packets.

The reception process then flows to step SB8, where the data of the first received packet is buffered in the home computer's memory. At step SB9, the home computer determines whether the time data in the packet is before the home computer's time (see page 22, line 26 to page 23, line 8). The answer is no for the first received packet, because the time of the home computer was set back from the time of the first received packet. The process is accordingly terminated. The home computer continues to count up the home computer's time while receiving subsequent packets. After each subsequent packet is buffered at SB8, the computer checks whether the time data of the first received packet is before the home computer's time at step SB9. When the computer's time finally reaches the time of the first received data, the home computer proceeds to Fig. 8 for processing the data. Because the first received data and subsequently received data have been buffered in the home computer's memory, processing can proceed smoothly.

Claim 41 recites "a judging device that judges whether each of said received music data is received first from the external device or not." This element corresponds to the discussion above regarding step SB2 and the "Receive" flag.

Claim 41 further recites "a controlling device that rectifies said first time information by a predetermined value and sets the rectified first time information as second time information for the music data processing apparatus when said judging device judges said received music data is the first received data and does not set the first time information as the second time information when said judging device judges said received music data is not the first received data . . . ." This element corresponds to the discussion above regarding steps SB2 and SB3.

Independent claims 45 and 46 are directed to a music data processing method and a storage medium respectively. Claims 45 and 46 recite steps that correspond to the elements of claim 41.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 41-46 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Moline et al. (U.S. Patent No. 5,883,957) in view of Shioda (U.S. Patent No. 5,430,243). Claims 41-46 are rejected under § 103(a) as being unpatentable over Moline in view of Isozaki (U.S. Patent No. 5,999,905). Claim 41 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

VII. ARGUMENT

A. Claims 41-46 Are Patentable Over Moline And Shioda.

As discussed above, the present invention rectifies the transmitted time information of the first received data to actually set the time of a receiving device. Furthermore, the time information of data received after the first received data is not used to set the time of the receiving device.

Claim 41 recites "a controlling device that rectifies said first time information by a predetermined value and sets the rectified first time information as second time information for the music data processing apparatus when said judging device judges said received music data is the first received data and does not set the first time information as the second time information when said judging device judges said received music data is not the first received data . . . ."

Applicant respectfully submits that Moline and Shioda do not disclose, individually or in combination, the above recitation. Specifically, neither reference discloses (1) setting the time of the receiving device based on the rectified time information of the first received data and (2) *not* setting the time of the receiving device based on the time information of subsequently received data.

Moline is directed to a method for distributing MIDI files over the Internet. The Examiner's Office Action cites to two different embodiments – neither of which discloses the above operation. Fig. 4 illustrates an embodiment where a MIDI file 409 is transmitted over the Internet 411 to a client 413. Upon receipt, the browser 429 activates a MIDI plugin 431. The plugin 431 acts as a MIDI controller having a file reader and a MIDI stream generator (see Col. 9, lines 42-54).

The file reader reads events and converts an "elapsed time descriptor" for each event to a "time stamp" (see Col. 9, lines 51-54). The elapsed time descriptor specifies the time elapsed since the last event message (see Col. 6, lines 50-52). The time stamp contains the sum of the elapsed times in all of the time descriptors from the beginning of the track to the current event (see Col. 6, lines 52-54).

The time conversion thus converts the time of each event to be based on the beginning of the track rather than in relation to the previous event. This is done to simplify the computations performed by the MIDI stream generator (see Col. 6, lines 58-62 and Col. 7, lines 7-20). The conversion, however, is only applied to each event data. Nowhere does Moline disclose or suggest that the time conversion for each event data is used *to set the time of the client 413*. That is, it does not disclose "a controlling device that rectifies said first time information by a predetermined value and *sets the rectified first time information as second time information for the music data processing apparatus* when said judging device judges said received music data is the first received data" (emphasis added).

Moline discloses another embodiment in which a live MIDI performance is broadcast to a receiving device (Col. 10, lines 1-44). Fig. 6 illustrates a sender 621 sending a MIDI track 607 to receiver 619 through the Internet 608. The track 607 is a sequence of events, with each event

containing an event message and a time stamp as defined above (see Col. 10, lines 52-56). Moline recognizes that the transmission over the Internet can be delayed and discloses a method of delaying reproduction by the receiver 619 until enough track has been accumulated (see Col. 11, lines 56-67).

This method, however, does not use the time information of the MIDI events to set the time of the receiver 619. It is stated at Col. 13, lines 7-14 (and Fig. 8) that a server start time is determined when the receiver creates a buffer to store the MIDI data. A delay time is added to the server start time to obtain a play start time. As the track is received by the receiver, the time stamp for each event is added to the server start time and subtracted from the play start. When the sum of the server start time and a given time stamp is equal to or greater than the play start time, enough track has been accumulated and the receiver begins to play.

What is important here is that the time of the MIDI events, i.e., the time stamps, are not used to set the time of the receiver 619. Only a calculation is performed to see if enough track has been stored. That calculation – adding a given time stamp to the server start time and comparing the sum to the play start time – is not used in any way to set the time of the receiver. That is, Moline does not contain any disclosure of "a controlling device that rectifies said first time information by a predetermined value and sets the rectified first time information as second time information for the music data processing apparatus when said judging device judges said received music data is the first received data . . . ."

Moreover, even if the time of the receiver was somehow set by the sum of a given time stamp and the server start time, there is no disclosure or suggestion that this setting is based *only* on the time stamp of the first received MIDI event. Moline instead discloses doing the same calculation for *every* event data until enough track is accumulated. There is no disclosure or suggesting of setting the time of the receiver based on the time stamp of only the first received MIDI event. It therefore fails to disclose or suggest a controlling device that "does not set the first time information as the second time information when said judging device judges said received music data is not the first received data . . . ."

Moline's deficiency – failing to disclose setting the time of the apparatus based on the rectified time information of the first received data – is not made up by Shioda. Shioda is directed to a sound effect-creating device. The device creates a repeat effect, i.e., a tone is followed by the same tone at a later time. The device in Shioda has two inputs (see Fig. 1b). The first input is connected to an electronic musical instrument, while the second input is connected to a tone signal input, e.g., microphone. The device determines the tempo of the MIDI tone signal inputted by the electronic musical instrument and determines a delay time based on the tempo. It then uses the delay time to create a mixed signal comprising the signal from the microphone and its repeat signal delayed by the determined delay time (see Col. 6, lines 22-37).

The Examiner apparently viewed Shioda as illustrating the analysis of an input MIDI signal to determine a delay time. The delay time, in the Examiner's opinion, meets the "second time" recitation of claim 41, because the delay time is used to produce a time-delayed signal. However, the "second time" recitation in claim 41 refers to the time of the apparatus. Shioda fails to even remotely disclose or suggest that the delay time is used to set the time of the effect-creating device. All that is disclosed is that the delay time is used to coordinate the repeat signal with the original signal from the microphone. Thus, as with Moline, Shioda fails to disclose setting the time of the apparatus based on the rectified time information of the first received data.

Furthermore, Shioda's delay time analysis changes with the tempo of the input MIDI signal (see Col. 6, lines 37-46 and Col. 8, lines 54-67). That is, the delay time increases as the tempo slows down and decreases as the tempo picks up. Even if one somehow' considers the delay time as meeting the recited "second time," the delay time is adjusted based on subsequently received data. In contrast, claim 41 recites that the controlling devices "does not set the first time information as the second time information when said judging device judges said received music data is not the first received data."

Accordingly, Applicant respectfully submits that claim 41 and its dependent claims 42-44 are patentable over Moline and Shioda.

Applicant also respectfully submits that claims 45 and 46 are patentable over Moline and Shioda for at least the reasons set forth above with respect to claim 41. Both claims recite "rectifying said first time information by a predetermined value and setting the rectified first time information as second time information for the music data processing apparatus when said judging step judges said received music data is the first received data and not setting the first time information as the second time information when said judging step judges said received data is not the first received data . . . ."

B. Claims 41-46 Are Patentable Over Moline And Isozaki.

In rejecting claims 41-46 in view of Moline and Isozaki, the Examiner repeated his analysis of Moline and cited Isozaki as another example of a buffering system teaching a "second time." Like Shioda, Isozaki fails to make up for Moline's deficiencies.

Isozaki is directed to an encoding apparatus for recording data on a DVD video disk. The input data typically comprises both video and audio data reproduced by a digital video tape recorder (VTR). If more than one audio tape is loaded into the digital VTR, the audio frames from the two tapes are not continuous. Isozaki discloses an apparatus that can keep processing continuous at a source switch point.

Fig. 1 illustrates a digital VTR 2 that outputs audio data to encoder 11. The digital VTR 2 also outputs time information Ct relating to the video data to a timing generating circuit 13. The timing generating circuit 13 provides timing data to the encoder and is controlled by timing control means 21 illustrated in Fig. 2. The timing control means 21 has a start-signal outputting means 21. A user sets the start time which is stored in storage area Z1 (see, e.g., Col. 8, lines 39-47). When the time indicated by time information Ct reaches the stored start time, a start signal is generated by the start-signal outputting means 21 to the timing generating circuit 13 (see Col. 11, lines 1-4). The timing generating circuit 13 then starts counting for encoding the audio data. In short, a user sets a "start time," which when reached, commences the encoding of audio data.

The Examiner cites the "start time" as meeting the "second time" recitation. However, the "second time" recitation provides that the second time is set as the time of the apparatus based on the time information of the first received data. The "start time" of Isozaki is neither used to set the time of the apparatus nor is it based on the time information of the first received data. The "start time" is merely when audio data encoding commences – not the time of the apparatus. Moreover, Isozaki discloses that the user provides the "start time" (see Col. 8, lines 43-45). That is, there is nothing in the disclosure of Isozaki cited by the Examiner that discloses or suggests that the "start time" is *based on the time information of the received audio data*. Accordingly, Applicant respectfully submits that claim 41 and its dependent claims 42-44 are patentable over Moline and Isozaki.

Applicant also respectfully submits that claims 45 and 46 are patentable over Moline and Isozaki for at least the reasons set forth above with respect to claim 41.

C. Claim 41 Is Not Indefinite Under § 112, Second Paragraph.

Claim 41 recites a judging device "that judges whether each of said received music data is *received first from the external device or not*" and a controlling device "that rectifies said first time information by a predetermined value and sets the rectified first time information as second time information for the music data processing apparatus when said judging device judges *said received music data is the first received data*" (emphasis added).

The Examiner contends that the two italicized phrases are unclear, because they fail to clearly define "whether the first data is relative to the 'external device' or relative to all data received."

Applicant respectfully submits that claim 41 is not indefinite. The first italicized recitation clearly defines that the first data is the first data received from the external device. Specifically, it provides that the judging device judges whether the data is received "first from the external device." The second italicized phrase provides that the music data is "*the* first received data." The use of the antecedent "the" links the two recitations, such that "the first received data" is the first received data

from the external device. Accordingly, Applicant respectfully submits that claim 41 is not indefinite under § 112, second paragraph.

VIII. CLAIMS APPENDIX

A copy of the claims 41-46 involved in the present appeal is attached hereto as Appendix A.

IX. EVIDENCE APPENDIX

No evidence pursuant to §§ 1.130, 1.131, or 1.132 or entered by or relied upon by the examiner is being submitted.

X. RELATED PROCEEDINGS APPENDIX

No related proceedings are referenced in II. above, or copies of decisions in related proceedings are not provided, hence no Appendix is included.

Dated: August 22, 2005

Respectfully submitted,

By _____

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APPENDIX A

Claims Involved in the Appeal of Application Serial No. 09/037,822:

Claim 41 (previously presented): A music data processing apparatus connecting to an external device via a public communications line, comprising:

a receiver that receives a series of music data each containing first time information from said external device via the public communications line;

a judging device that judges whether each of said received music data is received first from the external device or not;

a controlling device that rectifies said first time information by a predetermined value and sets the rectified first time information as second time information for the music data processing apparatus when said judging device judges said received music data is the first received data and does not set the first time information as the second time information when said judging device judges said received music data is not the first received data;

a memory that temporarily stores said received music data;

a processor that counts up the second time information periodically and processes the stored music data in accordance with said counted up second time information and the first time information contained in the music data to be processed.

Claim 42 (previously presented): A music data processing apparatus according to claim 41, wherein said first time information contained in the music data received from the external device is absolute time added at the external device.

Claim 43 (previously presented): A music data processing apparatus according to claim 41, wherein said receiver further receives a value for rectifying the first time information from the external device, and

said controlling device rectifies said first time information with said received value.

Claim 44 (previously presented): A music data processing apparatus according to claim 41, further comprising a determiner that determines the predetermined value for rectifying the first time information in accordance with capacity of said memory for storing the received music data, and wherein the setting device rectifies said time information with said determined value.

Claim 45 (previously presented): A music data processing method performed by a music data processing apparatus connecting to an external device via a public communications line, said method comprising the steps of:

(a) receiving a series of music data each containing first time information from said external device via the public communications line;

(b) judging whether each of said received music data is received first from an external device or not;

(c) rectifying said first time information by a predetermined value and setting the rectified first time information as second time information for the music data processing apparatus when said judging step judges said received music data is the first received data and not setting the first time information as the second time information when said judging step judges said received data is not the first received data;

(d) temporarily storing said received music data; and

(e) counting up the second time information periodically and processing the stored music data in accordance with said counted up second time information and the first time information contained in the music data to be processed.

Claim 46 (previously presented): A storage medium storing a program, which a computer executes to realize a music data process for a music data processing apparatus connecting to an external device via a public communications line, comprising the instructions for:

(a) receiving a series of music data each containing first time information from said external device via the public communications line;

(b) judging whether each of said received music data is received first from an external device or not;

(c) rectifying said first time information by a predetermined value and setting the rectified first time information as second time information for the music data processing apparatus when said judging step judges said received music data is the first received data and not setting the first time information as the second time information when said judging step judges said received music data is not the first received data;

(d) temporarily storing said received music data; and

(e) counting up the second time information periodically and processing the stored music data in accordance with said counted up second time information and the first time information contained in the data to be processed.